ASSESSOR CHECKLIST: ENVIRONMENTAL PROGRAM REQUIREMENTS (revised 02/09/95)

The following pages present the criteria from the "Environmental Program Requirements" in a checklist format. The laboratory's policies and procedures must meet these requirements. Quality system documentation and supporting records must be available for the assessor's review.

Before the assessment, the laboratory is asked to complete all of the unshaded document reference identifiers in the checklist's second column (labelled "Doc. Ref.") and place a tick mark in the yes (Y), no (N), or not applicable (NA) space for each checklist item. This serves to help both the laboratory and the assessors prepare for the assessment and may save a significant amount of assessment time and cost. The appropriate "document reference" should include quality manual, laboratory manual, SOP, etc. references. The noted references should specify procedure number, page number and section number, if possible, where each checklist item is addressed.

Assessor Instructions: Review the laboratory's documented quality system to verify compliance with the applicable Environmental Program documentation requirements. Assess to verify that the documented quality system is indeed implemented as described. Record comments related to any requirement on the space provided. Assess the laboratory's technical competence to perform specific tests or specific types of tests. Record comments related to tests on separate sheets and/or on the draft scope(s) of accreditation. All deficiencies must be identified and explained in the assessor deficiency report.

Laboratory Name: State:		City:							
Personnel Information	(Names,	Titles,	and	Responsibilities):					
Technical Manager:									
Quality Manager:									

Key	Techni	cal	Staff	and	Their	Unique	Capability*:_	

F:WP\MAN\CHE\ENVPROG.CHE022395

page 1 of 24

^{*} A "key technical staff person" is anyone whose absence or departure would reduce the laboratory's competence to carry out one or more specific tests.

Environmental Program Requirements - 1994 Checklist

Requirement	Coi e			Document Reference	Comment:
4E ORGANIZATION AND MANAGEMENT (No Additions)					
5E QUALITY SYSTEM, AUDIT AND REVIEW	1	T	1		
5E.1 The laboratory shall comply with the quality control (QC) procedures required by applicable federal or state environmental or public health agencies when testing for specific analytes.					
The laboratory shall have QC procedures (SOPs) and the each test technology addressing, as appropriate of:	_				
5E.1.1 Reagent/method blank analyses					
5E.1.2 Trip blanks and field blanks					
5E.1.3 Replicate/duplicate analyses					
5E.1.4 Spiked sample analysis					
5E.1.5 Blind samples					
5E.1.6 Surrogate standards					
5E.1.7 Laboratory control samples (LCSs)					
5E.1.8 Control charts or the equivalent (e.g. quality control database)					

Requirement	Coi	Complianc e		Document Reference	Comment
	Y	N	NA		
5E.1.9 Calibration standards, blanks and calibration devices (e.g. electronic conductivity meter, NIST- traceable thermometer)					
5E.1.10 Reference material samples					
5E.1.11 Internal standards					
5E.2 The laboratory shall comply with the following Control practices:	Qual	ity			
5E.2.1 The laboratory shall continually evaluate its performance (system process control) for each method and matrix which includes the determination of accuracy and precision.					
5E.2.2 Supervisory personnel shall conduct a documented review of the data calculations and QC results.					
5E.2.3 (A) Deviations or deficiencies in QC shall be reported to management and such reports shall be documented.					
(B) QC data shall be retrievable for all analytical results.					
5E.2.4 Method detection limits (MDLs) shall be determined and documented. (NOTE: Confirmation of MDLs shall be done as appropriate or as required by the method)					

Requ	uirement	Cor	Complianc e		Document Reference	Comment:	
		Y	N	NA			
5E.3	Acceptable performance limits for analytical instrumentation as well as each method shall be documented based upon the continuing statistical evaluation of data generated by the analysis of quality control samples, unless specific minimum acceptance limits are established by the method.						
5E.4	5E.4 Where applicable, the following minimum QC shall be practiced in the laboratory:						
	FOR INORGANICS/CLASSICAL CHEMISTS Note 1: Analysis of a low concentration or near (2 to 3 times MDL) standard with each batch of samples or less is recommended to assess analyt system performance near the MDL (required in CL for metals when client needs results near MDL). Note 2: A batch includes up to 20 samples plus attendant QC samples unless otherwise specified	r MDI 20 ical P SOW the					
	5E.4.1 One calibration check standard and associated blank in 20 samples tested; the lab should repeat analysis of all affected samples if the calibration check standard is outside ±10% of expected value unless the method specifies otherwise (broader acceptance ranges must be fully justified and documented).						

Requirement	Cor	Complianc e				 Comment:
	Y	N	NA			
5E.4.2 One reagent, method or digestion blank (carried through preparation) in 20 (or per batch).						
5E.4.3 One matrix spike in 20 (or per batch).						
5E.4.4 One duplicate or matrix spiked duplicate in 20 (or per batch).						
5E.4.5 One laboratory control sample in 20 (or per batch).						
FOR ORGANICS Note: Analysis of a spiked blank water or soil (sodium sulfate or silica sand for organics) wh subjected to ALL extractions and cleanups with batch of 20 samples or less is recommended to e analytical system performance (CLP Statement of (SOW) requires analysis of an LCS).	ich i each valua	.s .te				
5E.4.6 One calibration check standard in 20 samples (or method-specific frequency) inside established control limits; if any are outside the limits, repeat analysis of all affected samples.						
5E.4.7 One reagent, method or preparation blank (carried through preparation) in 20 (or per batch).						
5E.4.8 One matrix spike in 20 (or per						

batch).

Requirement		mpli	.anc	Document Reference	Comment:
	Y	N	NA		
5E.4.9 One duplicate or matrix spike duplicate in 20 (or per batch).					
5E.4.10 Internal or external standards and surrogates (where available) shall be used for all samples.					
5E.4.11 As required by the method, one laboratory control sample (consisting of a representative matrix spiked with a reference standard containing the target analytes) in 20 (or per batch).					
5E.5 The laboratory shall establish control limits for all the above types of QC samples and be able to explain and document the basis for such established limits.					
5E.6 Control charts or control data shall be used to track laboratory performance with the associated acceptance limits for each matrix and to evaluate instrument performance.					
5E.7 (a) The laboratory shall document, investigate and take corrective action for all episodes where the QC data shows an out-of-control situation.					
(b) The laboratory shall keep records of all out-of-control events, the determined cause(s) and corrective actions taken.					

Requirement Co		npli	anc	Document Reference	Comment:
	Y	N	NA		
(c) All reported data from an out-of-control event shall be appropriately qualified.					
5E.8 Interfering substances. See 10E.8					
6E PERSONNEL					
6E.1 (a) The technical manager (however named) shall possess a four year college degree from an accredited educational institution in chemistry or a related science or equivalent and have at least 3 years of non-academic laboratory experience.					
(b) The technical manager shall be on-site at least 50% of the time.					
6E.2 (a) The quality manager (however named) shall possess a four year college degree from an accredited educational institution in a basic or applied science or equivalent and have at least 1 year of non-academic laboratory experience and training in statistics.					
(b) Alternatively, the quality manager can have a college degree in other than the basic or applied sciences, with at least 4 years of non-academic analytical chemistry experience and training in statistics.					

Requirement	Cor	Complianc e		Document Reference	Comment:	
	Y	N	NA			
(c) The technical manager may also function as the quality manager so long as he/she does not act in the position as the sample analyst/technician analyzing the samples or act as the immediate supervisor of the analyst/technician involved with the analysis of the samples. The quality manager may be employed by the laboratory on a part-time basis or as a consultant.						
6E.3 (a) Persons in each senior technical position shall have a bachelor's degree in a relevant scientific field or equivalent experience.						
(b) At least one year of non-academic experience in relevant analysis is required.						
(c) Successful training in specific methods used in the laboratory shall be verified and documented as performance evaluations using reference/control materials of the matrices of concern.						
(d) Proficiency testing results must be documented.						
Persons filling the following job functions must meet the associated minimum experience and training requirements:						

Requirement	Complianc e		.anc	Document Reference	Comment:
	Y	N	NA		
6E.3.1 Inductively Coupled Plasma-Emission (ICP) Spectroscopy: One year experience with satisfactory completion of a short course on ICP or an equivalent in- house training course.					
6E.3.2 Flameless Atomic Absorption Spectroscopy: One year with satisfactory completion of a short course on graphite furnace atomic absorption (GFAA) or an equivalent in-house training course.					
6E.3.3 Flame Atomic Absorption (FLAA) Spectroscopy: One year with satisfactory completion of a short course on FLAA or an equivalent in-house training course.					
6E.3.4 X-Ray Fluorescence (XRF) Spectroscopy: One year with satisfactory completion of a short course on XRF or an equivalent in-house training course.					
6E.3.5 Gas Chromatography: One year with satisfactory completion of a short course on basic GC or an equivalent inhouse training course.					
6E.3.6 Mass Spectrometry: One year with satisfactory completion of a short course on basic GC or an equivalent inhouse training course.					

Requirement	Complianc		anc	Document Reference	Comment
	е		T	Reference	
	Y	N	NA		
6E.3.7 Mass Spectra Interpretation: One					
year with satisfactory completion of a					
vendor's training course,					
professional sponsored short course, or					
equivalent in-house training course.					
6E.3.8 General Chemistry and					
Instrumentation: Six months.					
6E.3.9 Field Testing: Six months.					
6E.3.10 Sample Collection: Six months.					
6E.4 (a) Analysts/technicians shall have completed					
a training course (or an equivalent in-house					
course) in relevant analyses and have					
demonstrated ability to produce reliable					
results through accurate analysis of reference					
materials (RMs), proficiency testing samples,					
or in-house quality control samples.					
(b) Their performance must be documented.					
(c) Junior staff (nondegreed personnel with					
less than 3 years relevant experience) must					
work under the direct supervision of the					
technical manager, or under the supervision of					
a senior technical person described above or					
under the instruction of an analyst/technician					
who has performed successfully over a period					
of three years in the relevant analyses using					
the same technologies being applied for the					
analysis of environmental samples.					

Requirement	Complianc e		anc	Document Reference	Comment:
	Y	N	NA		
6E.5 The laboratory personnel must comply with the f minimum levels of experience required for indep operation:		_			
6E.5.1 Sample Preparation: 3 months per method used.					
6E.5.2 Routine Sample Analysis: 6 months per method used.					

Requirement	Cor e	npli N	anc NA	Document Reference	Comment:
6E.6 Analysts/technicians in training may perform wo samples submitted for environmental analysis as the following conditions are met:					
6E.6.1 They have demonstrated the ability to produce reliable results through accurate analysis of RMs, proficiency testing samples or in-house quality control samples					
6E.6.2 Their immediate supervisor or instructor is readily available in their work area when they are preparing and/or analyzing the samples					
6E.7 The laboratory shall have documented evidence contained in their training records of proficiency of all personnel for each test method or activity performed on the matrices of concern.					
7E ACCOMMODATION AND ENVIRONMENT					
7E.1 In order to prevent contamination of samples or standards, the laboratory shall:					
7E.1.1 Use distilled/demineralized water that is demonstrated to be free of interferants at applicable detection limits.					

Requirement	Compli		anc.	Document Reference	Comment:
	Y	N	NA		
7E.1.2 (A) Check and record the conductivity of distilled/demineralized water at least once a week using a calibrated conductivity meter which is external to the water system.					
(B) The point of water collection shall be from a frequently used access point.					
7E.1.3 Exhaust hoods shall be vented in such a manner to prevent cross contamination of samples and equipment. (Example: The hood outlet of the organic extraction laboratory should not be near the air intake for the volatile organic laboratory. Evidence can be obtained by examination of laboratory blanks for contamination.)					
7E.1.4 Provide sample storage facilities which prevent cross contamination of samples with standards, solvents or reagents. See Section 11E.4 of this criteria. (Evidence of compliance may be obtained through the examination of storage areas, or through the use of laboratory storage blanks, travel/trip blanks or other blanks stored with samples.)					

Requirement	Complianc e		.anc	Document Reference	Comment
	Y	N	NA		
7E.2 (a) Each laboratory shall have a safety and chemical hygiene plan (see OSHA rule 29 CFR 1910), as part of their standard operating procedure.					
(b) Where safety practices are included as part of an approved method, the practices shall be strictly followed.					
(c) While more specific safety criteria are not an aspect of this accreditation program, laboratory personnel should apply general and customary safety practices as a part of good laboratory procedures.					
7E.2.1 The laboratory shall have toxic chemical handling areas consisting of impervious, non-reactive material covered with absorbent material.					
7E.2.2 Exhaust hoods for personnel protection shall be provided (see 29 CFR 1910.1450, Occupational Exposure to Toxic Substances in Laboratories and ANSI/AIHA Z9.5-1992, Standard for Laboratory Ventilation).					
7E.2.3 The laboratory shall have procedures and facilities for handling material that may transmit infectious agents (see NIH 88-8395 or equivalent).					

Requirement	Cor	Complianc e		mplianc Document Reference		Comment
	Y	N	NA			
7E.2.4 Reagents, corrosives, explosives, oxidants and flammable solvents shall be stored appropriately (see OSHA rule 29 CFR 1910.1450).						
7E.3 (a) Each laboratory shall have waste collection, storage and disposal procedures and policies (reference: 40CFR 261, 262 and 264) as part of their standard operating procedures.						
(b) Where disposal practices are included as part of an approved method, these practices shall be strictly followed.						
(c) While more specific disposal criteria are not an aspect of this accreditation program, the laboratory should apply appropriate federal, state and local disposal practices as a part of good laboratory procedures.						
8E EQUIPMENT AND REFERENCE MATERIALS						
FOR ANALYTICAL BALANCES/PAN BALANCES:						
8E.1 Analytical balances shall be capable of weighing to 0.1 mg.						
8E.2 Records of balance calibration shall be kept covering at least the effective range of its use traceable to Class 2 or 3 (per ASTM E617) reference weights (formerly classified as Class S and S-1).						

Requirement	Coi	Complianc e				Comment:
	Y	N	NA			
8E.3 Records showing functional/calibration checks for each day of use for analytical balances and monthly for pan balances shall be maintained. (Note: Criteria for the accuracy of balances must be established. ASTM E200-91 recommends an accuracy of 0.1% or less.)						
8E.4 The balances shall be serviced and calibrated at least annually by an authorized person and a certificate shall be provided and retained identifying traceability to an appropriate national/international measurement standards body, such as the National Institute of Standards and Technology (NIST).						
8E.5 The reference weights shall be calibrated at least every five years.						
FOR PH METERS						
8E.6 The laboratory shall use a clean pH meter with appropriate electrode with scale graduations at least 0.1 pH unit (calibrated to ±0.1 pH unit for each use period).						
8E.7 Either a thermometer or a sensor for temperature measurement to make corrections for pH measurement or an automatic compensation device shall be in use.						

Requirement	Cor e	Complianc e		Document Reference	Comment:
	Y	N	NA		
8E.8 Either a magnetic, TFE-coated stirring bar or a mechanical bar with inert plastic-coated impeller shall be available.					
8E.9 (a) Records shall be kept showing daily, or before each use, calibration, whichever is less frequent.					
(b) Calibration shall be performed with at least two buffers in the pH range expected in the samples.					
8E.10 Aliquots of standard pH 4 & pH 7 or pH 7 & pH 10 shall be used only once.					
FOR CONDUCTIVITY METERS					
8E.11 A conductivity meter with an error not exceeding 1% or 1 micromhos/cm, whichever is greater, shall be in use.					
8E.12 Records shall be kept to show a daily, or before each use, calibration check, whichever is less frequent.					
8E.13 Records shall be kept showing that the cell constant is determined annually.					
FOR GLASSWARE					

Requirement	Cor	Complianc e		Document Reference	Comment:
	Y	N	NA		
8E.14 (a) Glassware shall be cleaned in a manner appropriate for the analytical procedures for which it is used including protocols for: metals, ammonia, phosphorus, volatiles and semivolatiles.					
(b) These cleaning procedures shall be documented.					
FOR REFRIGERATORS					
8E.15 The bulb of the thermometer in each refrigerator shall be immersed in liquid.					
8E.16 Thermometers shall be graduated in increments no larger than 1EC.					
8E.17 Records shall be kept to show that refrigerator temperatures are maintained in the range of 2-5EC ± 1EC.					
8E.18 Samples to be analyzed for volatile organic compounds (VOCs) shall be stored in separate refrigerators from all other samples.					
FOR OVENS					
8E.19 Thermometers shall be graduated in increments no larger than 1EC.					

Requirement	Cor	Complianc e		_		Comment:
	Y	N	NA			
8E.20 If oven temperature cannot be read without opening the door, the bulb of the thermometer shall be immersed in a sand bath. (A second thermometer should be used to evaluate hysteresis of operation.) 8E.21 Oven temperatures shall be controlled and monitored (e.g. beginning and end of each use cycle) to meet applicable method requirement.						
FOR MICROWAVE OVENS		<u> </u>				
8E.22 The calibration of the power available for heating shall be documented at least weekly in order to determine that the microwave has not started to degrade and that absolute power settings (watts) may be compared from one microwave to another. (EPA 600/8-91/213; NTIS PB92-114172)						

Requirement	Complianc		and	Document	Comment
kedarrement	e	пртт	anc	Reference	Comment;
	Y	N	NA		
FOR HOT PLATES					
8E.23 Monitor temperature at the center of the hot plate, where appropriate, and document results. (Note: An uncovered beaker containing 50 mL of a liquid such as an oil located in the center of the hot plate can be used to estimate the temperature.)					
FOR INCUBATORS/WATER BATHS					
8E.24 Method specific temperature requirements shall be controlled and monitored during the course of a test and appropriate records maintained to assure compliance.					
FOR THERMOMETERS					
8E.25 The laboratory shall have access to a NIST-traceable thermometer.					
8E.26 The calibration (correction factors) or working liquid-in-glass thermometers shall be checked at least annually against a NIST-traceable certified thermometer.					
8E.27 The calibration (correction factors) of dialtype thermometers shall be checked at least quarterly against a NIST-traceable thermometer.					
8E.28 The NIST-traceable thermometer(s) shall be calibrated at least every five years.					
FOR AUTOPIPETORS/DILUTORS					

Requirement	Cor	Complianc e		_		Document Reference	Comment:
	Y	N	NA				
8E.29 Apparatus having sufficient sensitivity for the application shall be in use.							
8E.30 Records shall be kept showing that delivery volumes are checked gravimetrically, as appropriate, each month of use.							
9E MEASUREMENT TRACEABILITY AND CALIBRATION							
9E.1 Quality control materials and calibration standards that are traceable to appropriate national/international measurement standards shall be used, where available.							
9E.2 The frequency, conditions and standards used to establish calibration of all analytical/testing methodology shall be documented.							
9E.3 All working standards shall be verified versus primary (reference) standards, where available, and this verification shall be documented.							
9E.4 The traceability of the specific calibration, calibration check, control, or reference standards, samples, or mixtures of such standards or samples used to establish or verify the validity of the analytical measurement shall be documented.							

Requirement	Cor	Complianc e				Document Reference	Comment:
	Y	N	NA				
9E.5 Reference materials/reagents shall be labeled with concentrations, date of preparation, expiration date and the identity of the person preparing the reagent.							
9E.6 Refrain from using any material beyond the specified expiration date unless documented procedures have been followed for assigning a revised expiration date.							
9E.7 Standards preparation documentation, such as a preparations record book, shall be maintained.							
9E.8 (a) Instrument performance checks shall be carried out before use for analysis of samples.							
(b) Such checks shall include, as appropriate, evaluation of instrument sensitivity, noise levels and absorbance/emission levels versus historical values.							
(c) Acceptance criteria shall be stated.							
9E.9 (a) Standard curves shall be prepared to adequately cover the expected concentration ranges of the samples using a minimum of 3 data points for each analyte and one blank, unless otherwise specified by the method employed.							
(b) Acceptance criteria shall be stated.							

Requirement	Cor	Complianc e		_		Document Reference	Comment:
	Y	N	NA				
(c) If acceptance criteria are not met, then resolve the problem before generating reportable data.							
9E.10 (a) Field testing devices shall be calibrated as required by the testing procedure.							
(b) Acceptance criteria shall be stated.							
(c) In the absence of a requirement in the testing procedure, calibration shall be in accordance with the manufacturer's specification.							
(d) Calibration records shall be maintained.							
10E TEST METHODS							
10E.1 Documented procedures shall exist for making and controlling revisions to in-house SOPs (use revised SOPs only after written authorization by senior technical personnel).							
10E.2 Documented procedures shall exist for data collecting and reducing, reporting and record keeping.							
10E.3 Documented method performance procedures shall exist to apply at appropriate levels of all measurement systems.							
10E.4 Documented procedures shall exist for verifying test reports.							

Requirement	Complianc e			Document Reference	Comment:
	Y	N	NA		
10E.5 Documented procedures shall exist for correcting erroneously reported results.					
10E.6 Analytical standards shall be prepared at a frequency consistent with method requirements and good QC (frequency is a function of concentration and type of matrix; generally, the lower the concentration the less stable the standard).					
10E.7 Methods shall be specified and routing analyses performed for checking all solvents and reagents used for dilutions and extractions.					

Requirement	Coi e	Complianc e		Document Reference	Comment:
	Y	N	NA		
10E.8 SOPs shall exist for test methods supplying or referring to information addressing the following areas: (a) Interferences (b) Safety Considerations (c) Apparatus and Equipment (d) Reagents and Supplies (e) Sample Preservation and Storage (f) Sample Preparation (g) Instrument Calibration (h) Quality Control Procedures (i) Detailed Step-By-Step Procedure (j) Sample Calculations (k) Method Performance Criteria (accuracy and precision)					
10E.9 (a) Acceptable methodologies shall be followed.					
(b) Procedures published by federal agencies (e.g. USEPA, NIOSH), nationally or internationally recognized technical authorities or other validated procedures may be acceptable to use once the laboratory has demonstrated adequate performance with the method for each particular matrix.					
(c) Alternative procedures and/or modifications of methods may be used if they have been EPA or State approved.					
10E.10 Evaluate method performance in the following	ways	:			

Requirement	Complianc e		.anc	Document Reference	Comment:
	Y	N	NA		
10E.10.1 Linear calibration ranges (or working calibration ranges) shall be established and routinely verified for each method.					
10E.10.2 Method detection limits (MDLs) shall be established and statistically verified at least annually where appropriate for each method and matrix of concern.					
10E.10.3 For methods with stated MDLs, the laboratory shall demonstrate and document its ability to achieve such MDLs.					
10E.10.4 MDLs shall be determined using procedures published or recognized by USEPA. An example of an acceptable recommended procedure is in 40 CFR Part 136, Appendix B.					
11E HANDLING OF TEST SAMPLES					
11E.1 Adequate written procedures must be written for receipt, storage and processing of samples (including, as applicable, trip and field blanks) to ensure that holding times are met.					
11E.2 Samples must be given an unambiguous sample identification when logged in.					
11E.3 Permanent records for sample log-in data must be maintained.					

Requirement	Cor	Complianc e		Document Reference	Comment:
	Y	N	NA		
11E.4 Samples must be stored in such a way as to maintain 6 their identity, integrity, stability and concentration (see Section 7E.1).					
11E.5 Sample preservation records must be maintained.					
11E.6 Appropriate documented chain-of-custody procedure shall be followed, when required.					
11E.7 The laboratory shall document failure of sample collector to use appropriate containers, preservatives, packaging and incorrect documentation and labeling upon receipt of samples.					
11E.8 Sample disposal must meet waste disposal criteria as applicable. (See Section 7E.3)					
12E RECORDS					
12E.1 All observations and calculations shall be recorded in a permanent manner (such as laboratory notebooks, pro-forma work sheets or magnetic media) at the time they are made and the units of measurement in which observations are recorded shall be stated.					
12E.2 Original records shall be uniquely identified and traceable to the test items to which they refer and to any test reports based on them.					

Requirement	Complianc e		anc	Document Reference	Comment:
	Y	N	NA		
12E.3 Records shall be traceable, retrievable and legible and shall include sufficient information and explanation such that they can be readily interpreted by staff other than those responsible for their generation.					
12E.4 Records shall contain sufficient information to permit identification of possible sources of error and to permit, where feasible and necessary, satisfactory repetition of the test under the original conditions.					
12E.5 Records shall contain sufficient details of any significant departures from test specifications or other specified procedures including authorizations for such departures.					
12E.6 Records shall be checked for data transcription or calculation errors and the checks shall be documented.					
12E.7 Records shall identify the person or persons responsible for their creation and the date of such creation and the person(s) checking data transcriptions and calculations and the date of such checking.					
12E.8 Corrections or amendments to test records shall be made in a manner that does not obliterate the original data and are signed or initialled and dated by the person responsible.					

Requirement	Complianc e			Document Reference	Comment
	Y	N	NA		
12E.9 A list of all staff documenting their initials and/or signatures as used in documents such as logbooks shall be maintained.					
12E.10 (a) Test records shall be protected from loss, damage, misuse or deterioration and shall be retained for an appropriate period in a manner that permits retrieval when required.					
(b) Test records that are created and/or retained on magnetic media (e.g. computer disks) or photographic media (e.g. microfiche) shall be stored in a manner that protects them from the hazards that degrade such media.					
(c) Provisions shall be made for the printing of such records when required.					

Requirement	Cor	Complianc e		Document Reference	Comment:	
	Y	N	NA			
13E CERTIFICATES AND REPORTS (No Additions)						
14E SUB-CONTRACTING OF CALIBRATION OR TESTING (No Additions)						
15E OUTSIDE SUPPORT AND SUPPLIES (No Additions)						
16E COMPLAINTS (No Additions)						